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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/650,278

08/28/2003

Frederick A. Perner

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03/23/2005

EXAMINER

TRAN, MICHAEL THANH

HEWLETT PACKARD COMPANY

P O BOX 272400, 3404 E. HARMONY ROAD

INTELLECTUAL PROPERTY ADMINISTRATION

FORT COLLINS, CO 80527-2400

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,278

Applicant(s)

PERNER ET AL.

Examiner

Michael t. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 and 22 is/are allowed.
- 6) ☒ Claim(s) 1, 9-11, 17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 2-8, 12-16 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 082803.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

MICHAEL TRAN

EXAMINER

DETAILED ACTION

1. In response to the Communications dated August 28, 2003, claims 1-22 are active in this application.

Information Disclosure Statement

2. The information disclosure statement filed August 28, 2003 has been considered.

Claim Objections

3. Claims 2-8, 12-16, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

It is unclear as to what is being referred to as "the data storage means", claim 17, line 4. Is it part of the "memory means" or a totally different element within the digital device.

Claim Rejections – 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

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(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claim 1 is rejected under 35 U.S.C 102(e) as being anticipated by Chang [U.S. Patent #6,836,431].

With respect to claim 1, Chang discloses a reference-initiated sequential read method that comprises: forming a first attribute measurement associated with a stored data value in a first memory element [criteria of data being "11" or not – see columns 13 and 14]; using the first memory element to determine a decision threshold [again, depends on whether the data being "11" or not – see columns 13 and 14]; comparing the first attribute measurement to the decision threshold to determine said stored data value in the first memory element [if data is not "11", as determined in column 13, then sensing initiates]; forming a subsequent attribute [much like the first, see columns 13 and 14] associated with a stored data value in a subsequent memory element; and comparing the subsequent attribute measurement to the decision threshold to determine the stored data value in the subsequent memory element [same as before – see columns 13 and 14].

6. Claims 9-11 are rejected under 35 U.S.C 102(e) as being anticipated by Chang [U.S. Patent #6,836,431].

With respect to claim 9, Chang discloses a memory that comprises: a plurality of adjacent memory elements [cell units – see columns 13 and 14]; and sense amplifier [see columns 13 and 14] coupled to the plurality of memory elements, wherein the sense amplifier is configured to sequentially determined data values [sense] stored in the plurality of adjacent memory elements after using a first memory element [criteria of data being “11” or not – see columns 13 and 14] to determine a decision threshold [if data is not “11”, as determined in column 13, then sensing initiates].

With respect to claim 10, Chang discloses that the decision threshold is used unchanged [criteria of data being “11” or not – see columns 13 and 14] to determine the data values in each of the plurality of adjacent memory elements.

With respect to claim 11, Chang discloses that the plurality of adjacent memory elements are aligned along a column. See columns 13 and 14.

7. Claims 17, 19, and 20 are rejected, as understood, under 35 U.S.C 102(e) as being anticipated by Chang [U.S. Patent #6,836,431].

With respect to claim 17, Chang discloses a digital device that comprises: a memory means [cell units – see columns 13 and 14] for storing data sectors; and a sensing means [sense amplifier – see columns 13 and 14] for sequentially retrieving [sensing] data sectors from the data storage means [it is being interpreted as being the memory means], wherein as a part of retrieving each data sector the sensing means determines a decision threshold [[criteria of data being “11” or not – see columns 13 and

14] using a portion of the memory means that stores a first value in the data sector [reference of “11” or not].

With respect to claim 19, Chang discloses that the data sectors are stored along columns in the memory means [memory units are aligned in columns – see columns 13 and 14].

With respect to claim 20, Chang discloses a write means [any of the registers – see figures] for storing at least one predetermined data value in said portion of the memory means.

Allowable Subject Matter

8. Claims 21 and 22 are allowable over the prior art of record.

9. The following is an Examiner's statement of reasons for the indication of allowable subject matter: the prior art of records does not show (in addition to the other elements in the claim) the following:

- Writing a predetermined data value to the first memory element; and measuring an attribute associated with the predetermined data value in the first memory element.
- After determining the decision threshold, forming a sequence of attribute measurements associated with a corresponding sequence of memory elements; and comparing the attribute measurements to the decision threshold to determine stored data values in the sequence of memory elements.

- Wherein the sense amplifier is configured to redetermine a decision threshold as part of determining data in each of multiple different pluralities of adjacent memory elements.
- Wherein the sense amplifier also uses a second memory element in the plurality of adjacent memory elements to determine the decision threshold.
- A read buffer coupled to the sense amplifier and configured to buffer a sector of read data.
- A error correction code decoder coupled to the sense amplifier and configured to perform error correction on data values received from the sense amplifier.
- A write driver coupled to the first memory element and configured to store at least one predetermined value in the first memory element, wherein the sense amplifier uses a measurement of an attribute associated with the predetermined value to determine the decision threshold.
- Combining the first and second attribute measurements to determine a decision threshold; forming a subsequent attribute measurement associated with the stored data value in a subsequent memory element; and comparing the subsequent attribute measurement to the decision threshold to determine the stored data value in the subsequent memory element.

Conclusion

10. When responding to the Office action, Applicants are advised to provide the Examiner with line and page numbers of the application and/or references cited

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to assist the Examiner in the prosecution of this case.

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Michael T. Tran whose telephone number is (571) 272-1795. The Examiner can normally be reached on Monday-Thursday from 7:30-6:00 P.M.

12. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1650.



Michael T. Tran

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March 18, 2005

MICHAEL TRAN
PRIMARY EXAMINER